

Remarks

In the Office Action mailed December 14, 2004:

1. Claims 3, 4, 21, 28 and 33 were apparently rejected under 35 U.S.C. § 112 ¶ 2 as being indefinite;
2. Claims 1-19, 21-26 and 28-33 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,721,316 (Epps); and
3. Claims 20 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Epps.

I Applicants' reply of February 28, 2005

In Applicants' reply filed February 28, 2005, claims 1, 3, 4, 12, 21, 28 and 33 were amended. These amendments are assumed to have been entered.

II Epps (U.S. Patent No. 6,721,316)

Epps is directed to a Flexible Engine and Data Structure for Packet Header Processing (title).

A. Epps Does Not Include a Timer Unit

Claimed embodiments of the invention (e.g., claims 8, 13, 22) recite the use of a timer unit for managing timers. Different timers may be associated with different communication streams, their states, the control blocks used to process a packet or set of data, and so on. Timers may be used to retain or reflect the state of associated communication streams, or other events that have occurred or that may occur in the future. Timers may therefore be associated with events such as opening a new communication connection, closing an existing connection, activity on an existing connection, etc.

The Examiner cited column 31, lines 51-52 of Epps, and stated that "timer unit can be programmed to control packet flows within the system." Applicants traverse. The cited portion of Epps simply states that "a programmable timer is started at the beginning of each pass through the queues." The timer is apparently used to merely time the processing of all queues (column 31, lines 52-60).

Epps thus uses a single timer, and therefore does not require or include a timer unit that “manage[s] a set of timers” as recited in, for example, claims 13 and 22.

The Examiner also cited item 1210 of FIG. 12 (the Queue Manager) and column 15, lines 51-52, which states that the queue manager provides control and coordination of the packet receive stage and the packet transmit stage. This does not teach *or* suggest Applicants’ timer unit, as it says nothing about using timers to perform the “control and coordination.” Also, the fact that Epps has a congestion avoidance scheme (Random Early Detection) teaches away from the use of Applicants’ timer unit, as RED looks at congestion levels, not timers (column 17, lines 19-24).

Thus, Epps’ timer cannot anticipate Applicants’ timer unit.

III Selected Claims

A. Claims 1-11

Claims 1-11 were addressed in Applicants’ reply filed February 28, 2005

B. Claims 12-21

Claims 12-21 were addressed in Applicants’ reply filed February 28, 2005

C. Claims 22-28

Claims 22-28 were addressed in Applicants’ reply filed February 28, 2005

D. Claims 29-30

Claim 29, as amended, recites the processing of a packet in a protocol processor. Details from the communication are used to identify a control block indicating how to process the packet. The control block identifies a plurality of timers managed by a timer unit, including one for determining if the communication stream has been inactive for a threshold period of time. As described above in Section II, Epps does not teach the use of a timer unit for managing multiple timers.

E. Claims 31-34

Claim 31, as amended, recites the packetization of a set of data for transmission, upon expiration of one of multiple timers managed by a timer unit. As described above in Section II, Epps does not teach the use of a timer unit for managing multiple timers. The use of a timer to identify a control block for controlling the packetization process is described at, for example, page 15, lines 14-21.

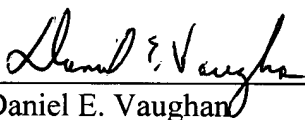
Claim 34 was added to recite the resetting of the expired timer.

CONCLUSION

No new matter has been added with the preceding amendments. It is submitted that the application is in suitable condition for allowance. Such action is respectfully requested. If prosecution of this application may be facilitated through a telephone interview, the Examiner is invited to contact Applicant's attorney identified below.

Respectfully submitted,

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By:  42,199
Daniel E. Vaughan (Registration No.)

Park, Vaughan & Fleming LLP
39180 Liberty Street, Suite 103
Fremont, CA 94538
(510) 790-9960: voice
(510) 790-9964: facsimile